



Firms and Markets

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FIRMS AND MARKETS (B01.1301.31, B01.1301.32)

Preliminary Syllabus

Course Description

The goal of this course is to give you some insight into how markets work. The course is structured in two parts. In the first part of the course, we study decision making by consumers and firms. We explore the fundamentals of demand and identify categories of costs that firms must consider when taking critical business decisions like pricing, exit or market entry. We study how supply and demand determines prices in efficient markets. We learn about market power and how the interplay between cost and demand fundamentals determines profit-maximizing decisions for firms. The second part of the course focuses on situations where, for one reason or another, markets don't work efficiently. Here, we emphasize the importance of strategic behavior, as modeled by game theory. Strategic interactions between firms in markets can be represented as games and we learn to predict the outcomes of such games and analyze how best firms can respond to their rivals' strategies. We discuss the basics of competition and cooperation (how do firms collude?), asymmetric information (what happens when sellers know more than buyers?) and market design (auctions).

Microeconomics (as the broad topic of this course is often called) is an important component of an MBA program. First, microeconomics focuses on specific dimensions of optimal firm decision making, such as pricing, entry and exit. Second, the formal economics perspective on business plays an important role in other fields of study, such as finance or marketing. Finally, by studying public policy towards market failures, microeconomics highlights important factors conditioning firm strategy.

Our experience with students in prior years is that much of what we learn in this course is intuitive. But much is not, and our hope is that the combination of theoretical structure and practical examples will be useful to you in the years to come. It will not make you a success on its own, but it might give you an edge a few times when it matters!

Prerequisites

You are expected to be comfortable with basic algebra and calculus, including systems of equations, logarithms and NPV (net present value) calculations, and derivatives.

Course Materials

- Lecture notes: They review the theory relevant to most classes. They outline and explain the key concepts, define terms, give examples, and (where it makes sense) work through numerical problems.
 - Textbook: There is no required textbook for this course. However, if you want a reference text, I recommend *Managerial Economics and Business Strategy* by Michael Baye (McGraw-Hill, 5th or 6th editions), and *Managerial Economics* by Samuelson and Marks (Wiley, 4th edition).
 - Slides: I will post the slides on Blackboard after each class. I recommend that you take notes as a supplement to the slides.
 - Additional material: Sometimes, I will post additional material on Blackboard, such as newspaper articles or research papers, which may be interesting or relevant.
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Deliverables and Grades

The various “deliverables” in the course are designed to develop different skills:

- Class participation: It is important to integrate what you learn and be able to express it effectively. Moreover, there is a great deal of collective insight and experience in the class and we all benefit from sharing it.
- Exams: There will be two in-class exams, one in the middle and the other at the end of the course.
- Problem sets: Problem sets emphasize quantitative applications of the principles and tools developed in class. They are due at the start of class. They will be marked with a check (and possibly a plus or minus). You are expected to hand these in and make a reasonable attempt. Failure to do so will be penalized.

- Group work will be an important component of the course, as there is a lot we can learn from each other's different experiences and perspectives. Group work is to be done in groups of about 5 students and will include a combination of the following.
 - Projects: One or two generally more complex and realistic quantitative assignments that use and extend the principles and tools developed in class.
 - Presentations: Every group may be asked to make a presentation to the class on a topic selected from a list of relevant themes. The goal is to apply economic principles to a real problem and to hone your communication skills. The content is generally more qualitative than assignments and projects.
 - News analysis: Each group may be asked to conduct a 'news analysis'. Such an analysis will be carried out during the first 5 minutes of the class. One member of the group will tell the rest of the class how one or more of the economic concepts that were taught in the previous week relates to some real-life economic application.

Your grade for the course will be based on your contributions to all of these deliverables, weighted as follows:

Group work	40%
Mid-term exam	25% (only if it helps you!)
Final exam	35% (or 60%)

Your performance in terms of class participation and in problem sets will serve as a tiebreaker if you are on the border between two grades. Occasionally, I may award bonus points towards your grade, if I judge your class participation to be especially insightful or valuable.

The mid-term only counts if it increases your grade. This means that if you do better in the final than the mid-term, then the mid-term will not count. The reason for doing this is that this course will move fast and I am sensitive to the fact that some students may need some time to familiarize themselves with what economics is about. Ultimately I care about what you learn by the end of the course - this grading scheme is intended to be consistent with that concern.

Final grades will follow the School's guideline for core courses: no more than 35% of the class will receive A or A-. This guideline was instituted in response to student concerns that different sections of a course might be graded by different standards. Dates and deadlines for all assignments will be provided in the detailed course outline.

Exams and re-grading

You are responsible for checking the exam dates and avoiding conflict with other commitments. You may not consult class notes, books, or any other material during the exams. However, you

may consult one page of notes (a standard-size sheet of paper written on two sides). Questions about grading must be made in writing no more than a week after the exams are returned.

Honor Code

The Stern community believes that honesty and integrity are necessary for rewarding academic and professional experiences. These qualities form the basis for the strong trust among members of the academic community (students, faculty, and administrators) that is essential for excellence in education. The Honor Code requires that each student act with integrity in all academic activities and endeavor to hold his or her peers to the same standard. In this course, you may discuss assignments with anyone, but any written work submitted for a grade should be your own. On exams, you may bring in one piece of paper with anything on it you like, but your answers should be entirely your own work.

Students with disabilities

If you have a qualified disability and will require academic accommodation during this course, please contact the Moses Center for Students with Disabilities (CSD, 998-4980) and provide me with a letter from them verifying your registration and outlining the accommodations they recommend. If you will need to take an exam at the CSD, you must submit a completed Exam Accommodations Form to them at least one week prior to the scheduled exam time to be guaranteed accommodation.

Assistance & Communication

I would like each of you to learn and gain as much as you can from this course. If you are stuck, or have any difficulty with the material, don't hesitate to ask for assistance. Please send me an email (joyee.deb@stern.nyu.edu) or stop by my office (KMC 7th floor, room 69). I try my best to respond promptly to email. My office hours are before class 5-6pm, and after class. If these don't work for you, feel free to email me and set up an alternate time. I will provide you with contact details for the teaching assistant at the start of the course.

All announcements regarding the course will be made on Blackboard. Besides administrative issues, I could post clarifications on the class material (arising out of our discussion in class or following from a fellow student's questions). You are responsible for checking Blackboard for announcements on a regular basis (i.e. at least a couple of times a week).

A Preliminary List of Topics to be covered

Demand: Utility function and indifference curves, demand curve, consumer surplus, demand elasticity, demand estimation

Economic cost analysis: Opportunity costs, sunk costs, marginal costs, economic costs and cash flows

Market equilibrium: Supply and demand curves, market forces, comparative statics, short run and long run competition

Externalities: Definitions, public goods, public policy

Market Power (Monopoly Pricing): Sources of market power, profit maximization and elasticity rule, economies of scale and scope, public policy towards mergers, inefficiencies.

Advanced Issues in Pricing: Price discrimination, market segmentation, versioning, bundling

Strategy and Games: Strategies and payoffs, normal and extensive-form games, best responses, Nash equilibrium, the Prisoners' Dilemma and other important games

Strategic Pricing: Hazards of price competition: the Bertrand trap and how to avoid it

Competition and Cooperation: Tacit and explicit collusion, trigger strategies, factors that enable cooperation

Commitment and Credibility: The value of a credible commitment, first-mover advantages, entry and exit.

Market Design (Auctions): Different auction formats, winner's curse, practical issues in market design

Information Economics: Asymmetric information - what happens when the seller knows more than the buyer? Moral hazard (agency problem) and adverse selection (the lemons problem), signaling, screening and reputation